

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
20 January 2005 (20.01.2005)

PCT

(10) International Publication Number
WO 2005/004818 A3

(51) International Patent Classification⁷: **C07D 401/04**

(74) Agents: **SOMERVILLE, Deborah, A.** et al.; Kenyon & Kenyon, One Broadway, New York, NY 10004 (US).

(21) International Application Number:

PCT/US2004/022226

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 9 July 2004 (09.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/485,963

9 July 2003 (09.07.2003) US

(71) Applicant (*for all designated States except US*): **IM-CLONE SYSTEMS INCORPORATED** [US/US]; 180 Varick Street, New York, NY 10014 (US).

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **OUYANG, Xiaohu** [CN/US]; 2802 Parsons Boulevard, Flushing, NY 11354 (US). **KISELYOV, Alexander** [UA/US]; 4203 Shorepointe Way, San Diego, CA 92130 (US). **CHEN, Xiaoling** [CA/US]; 1051 73rd Street, Brooklyn, NY 11228 (US). **HE, Hai-Ying** [CN/US]; 3552 12th Avenue, Brooklyn, NY 11218 (US). **KAWAKAMI, Joel** [US/US]; 91 Morris Avenue, West Milford, NJ 07480 (US). **PATTAROPONG, Vatee** [US/US]; 465 Saint Peter Drive, New Madrid, MO 63869 (US). **PIATNITSKI, Evgueni** [RU/US]; 868 East 7th Street, Brooklyn, NY 11230 (US). **TUMA, Maria, Carolina** [BR/US]; 68 Hunt Lane, East Haven, CT 06512 (US). **KINCAID, John** [US/US]; 9949 Azuaga Street, San Diego, CA 92129 (US).

Published:

— with international search report

(88) Date of publication of the international search report:

6 May 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HETEROCYCLIC COMPOUNDS AND THEIR USE AS ANTICANCER AGENTS

(57) Abstract: The present invention relates to heterocyclic compounds that have anticancer activity, and pharmaceutical compositions that contain such compounds, methods of treating diseases and conditions in mammals using such compounds and composition and methods for their manufacture.



WO 2005/004818 A3